

Gender Influence on Part-time Working: An Empirical Study upon the EU and Turkey

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Abstract

In this empirical study, it's investigated differences of part-time working rates between men and women in the period of 2000-2012. 17 members of the EU and Turkey -as a candidate country- are participated in the study. Turkey is participated into the study too, because Turkey must adapt the most of the regulations of EU as a candidate member of the Union. The data are collected from OECD and World Bank statistics web site. Beyond that many database indicate part-time employment rates for both common and national definition of part-time working for statistical purpose. According to this it's aimed to determine whether there is a significant difference between part-time working rates that are based on common and national definition. In the literature, there are some studies that investigate fertility rates and part-time employment rates of women. The correlation of these two variables that are belonged the years 2000-2012 is tested and the findings are indicated in the study. Furthermore, it's analyzed the rate differences of part-time working for men and women in the period of 2000-2012.

Keywords: part-time employment, fertility, women, men, gender.

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1. Introduction

Part-time employment has been publicly praised as a tool for promoting market flexibility and reorganizing working time, for family policy and for redistributing existing employment. For employers, a part-time option can permit greater flexibility in responding to market requirements. Working part-time may offer the chance of a better balance between working life and other activities (EUROFOUND, 2007).

In the literature it's proved that there is a significant difference between part-time employment rates of men and women. In this study it's aimed to investigate this claim for 18 countries between the years 2000-2012. In the EU, it's

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aimed to develop both benefits and working conditions of part-time working by the EU legislation in the late years. Due to this development, many men may also prefer this type of working as well as women. In this study it's investigated the increase of part-time employment rates of men in the 18 EU countries. According to the results, it's expected that part time employment rates of men and women probably will be closer until 2020 in the EU.

Part-time work is an atypical type of work that becomes widespread among women especially across the EU. Despite low earnings, low social security benefits many women prefer part-time jobs in order to balance work and life. However, part-time work is dealt with as an active labor market policy by the EU and gain importance for men as well as women.

In this study, it's analyzed that whether the accepted part-time hours are based on both common and national definition across the EU are similar significantly or not. As you will see in the literature review section of the study, according to common definition it's accepted 30 hours for cutoff point of part-time working, at the same time each country accept different time hours for cutoff points to define part-time working. Due to it's important for the researchers using correct data; it's analyzed whether there is significant difference between these two variables. The findings are also shown in the study. In the literature review of the study, it's mentioned that the relationship between fertility and part-time employment rate of women. In the last section of the study the findings are indicated and it's discussed upon them.

2. Literature Review

In this section, first of all part-time working concept is determined. At the same time, other variables which are related to part-time employment rates of women are investigated in terms of the EU regulations on the issue.

2.1. The Definition of Part-Time Working

The ILO legal definition of part time work is "an employed person whose hours of work are less than those of comparable full-time workers". The concept of a "comparable" worker is mentioned since the number of hours worked per week for full-time employees may vary considerably by profession (Buddelmeyer, Mourre & Ward-Warmedinger, 2005).

The definitions of part-time based on usual hours cut-offs comprise normal working hours as well as the overtime or extra time usually worked, whether it is paid or not. A national hour's cut-off is used to differentiate between part-time and full-time work in Australia (35 hours), Austria (35), Canada (30), Finland (30), Hungary (36), Iceland (35), Japan (35), New Zealand (30), Norway (37), Sweden (35) and the United States (35) (<http://kilm.ilo.org/KILMnetBeta/pdf/kilm05EN-2009.pdf>).

For certain countries such as Australia, Norway and Sweden additional criteria are applied in specific situations (Bastelaer, Lemaître & Marianna, 1997). Indeed, there are no exact working hours to define part-time working in many of the EU countries. For example in Germany, part-time covers everything below the working time customary in the establishment. In this context, although for some people 35 hours per week is already part-time, the quite low

proportion of only 37 percent of a full time equivalent is due to the number of marginal employees with very low working hours per week (Klinger&Wolf, 2008). In Turkey, 4857 numbered Labor Law determined five hours per day as limit for part-time workers. Each EU country has different legal regulations on part-time working. Furthermore many of the EU countries' legal frameworks on this regulation are based on EU Council Directive 97/81/EC of 15 December 1997.

For statistical purposes, however, part time is commonly defined as a specified number of hours. The threshold which divides workers into full-time and part-time workers varies from country to country, but is usually either 30 or 35 hours per week (ILO, 2004).

2.2. Part-time Work and Women in the EU

In Member States, a minimum number of hours of work are required to qualify for certain social benefits and entitlements. Thus, part-time workers are often excluded or benefit less from certain pension and social protection entitlements. In recognition of this problem, the EU Directive (97/81/EC) on part-time work urges Member States to set up a legal framework for the equal treatment of part-time workers by the employment and social protection systems (EUROFOUND, 2007). It's thought that due to this legislative regulations in the EU, the number of part-time workers have increased especially among women. The purpose of the Directive is:

- *To provide for the removal of discrimination against part-time workers and to improve the quality of part-time work;*
- *To facilitate the development of part-time work on a voluntary basis and to contribute to the flexible organization of working time in a manner which takes into account the needs of employers and workers.*

The cross national variation in part-time work rates is shaped by a confluence of factors, including inter-country differences in labor market structures, macro-economic conditions, social insurance rules, union preferences, public policies on part-time employment, the availability of work-family programs, and attitudes toward work. In the EU in the early 1990s, approximately 80% of women part-time workers and 65% of male part-time workers reported that they were voluntarily working part-time (Bardasi & Gornick, 2000).

Relative to women who work full-time, those employed part-time give up more than income due to their reduced hours. So why do such high percentages of women work part-time? There are many objective factors associated with the decision to work part-time. Amongst the most important drivers are additional household income, the number of children in the home as well as the presence of small children in the home (Gash, Mertens & Gordo).

According to EUROFOUND's (2013) report, the distribution of working time is greater among women than men. Women's working time is strongly influenced by their life stage. In all life stages, employed women work fewer paid hours than employed men. In all country clusters, women's working time decreases during parenthood, while at the same time the gender gap in working time increases significantly. The growth in part-time employment stands out as a prominent feature of the labor markets of a number of industrialized countries over the past two decades. In the EU,

the part-time employment rate increased from 13% in 1983 to 18% in 2001 (Buddelmeyer, Mourre & Ward-Warmedinger, 2005). In Table 1, it's seen part-time employment rates for both women and men, based on common and national definitions.

Table 1: Part-Time Employment Rates in the EU (% , 2000-2012)

	<i>Means of part-time employment rates according to common definition between the years 2000-2012</i>		<i>Means of part-time employment rates according to national definitions between the years 2000-2012</i>	
Country	Women	Men	Women	Men
Austria	30,2	4,2	42,6	6,6
Belgium	34,2	6,6	43,2	7,3
Czech Republic	5,3	1,5	8,4	11,2
Denmark	23,8	12,2	35,3	2,4
Finland	14,5	7,2	18,1	12,9
France	23,4	5,3	30,7	9,1
Germany	37,5	6,7	43,6	5,8
Greece	12,9	4,8	8,1	7,8
Hungary	4,7	1,9	6,3	2,9
Ireland	35,2	9,0	32,2	3,4
Italy	29,4	5,5	24,0	4,8
Luxembourg	29,4	2,5	34,0	3,0
Poland	13,4	4,6	9,2	7,1
Portugal	8,8	2,2	9,4	7,9
Spain	19,9	3,6	21,2	4,1
Sweden	19,5	8,1	35,7	11,7
Turkey	6,1	2,0	6,1	4,8
United Kingdom	38,3	9,3	41,9	10,5

Source: <http://stats.oecd.org/#>

2.3. Part-time Employment Rates of Women and Fertility

Fertility is derived from the behavioral choices people make in planning their future (Tooss, 2012). If the intermediate fertility countries follow the trend in developed industrialized countries, then the trend will also be one of increasing part-time employment. Part-time work is very much a female domain; in the countries for which data are available, well over half, if not over two-thirds, of all part-time workers are women. Furthermore, part-time work for women is increasingly involuntary, growing numbers are working shorter hours than they want (Lim, 2002).

Grant, Yeandle and Buckner (2006), concern the association between low pay and part-time work. Women experience a 'pay penalty' for working part-time and the prevalence of women working part-time in the UK economy is a key factor affecting the gender pay gap.

Employers seem to recognize this: women are much more likely than men to be offered flexible options (fixed and ad hoc), even when other significantly influential factors are controlled for. This suggests that work-life balance may still be perceived by some as a women's issue (Visser, Williams, 2006).

Cristina Sousa Gomes and others (2012) investigated the relationship between female employment and fertility. They participated 30 countries in their research which all of them either member or candidate of the EU. According to their empirical research the relationship is unequivocally positive for part-time, but weak and negative for full-time female labor between the years 2006-2010. In Table 2, the averages of fertility rates for 18 countries between the years 2000-2012 are indicated.

Table 2: Fertility Rates

Country Name	Average Rates (2000-2012, %)
Austria	1,4
Belgium	1,8
Czech Republic	1,3
Germany	1,4
Denmark	1,8
Spain	1,3
Finland	1,8
France	2,0
Greece	1,4
Hungary	1,3
Ireland	2,0
Italy	1,3
Luxembourg	1,6
Latvia	1,3
Poland	1,3
Portugal	1,4
Sweden	1,8
Turkey	2,2

Source: <http://data.worldbank.org/indicator>

3. Research Methodology

3.1. Sample and Data Collection Method

In this study, it's used part-time employment rates of women and men in terms of both common and national definitions of part-time working in 17 of the EU countries and Turkey as a candidate country. Although there are 28

countries in the EU as of the moment, in this study 18 (17 EU countries and Turkey) countries are participated to the research because there aren't available all of the EU countries' part-time rates between these years. The data are collected from OECD and World Bank database and the means of the rates that cover the years 2000-2012 that are shown in Table 1 and Table 2. The data are accessed to SPSS 20 program and some statistical analyses are used.

The rates are indicated for both common and national definitions of part-time working. Due to common definition, part-time employment is based on a common 30-usual-hour cut-off in the main job (Bastelaer, Lemaître & Marianna, 1997). In the previous section of the study, it's stated that each EU country has different regulation to define part-time working hours.

3.2. The Purpose of the Study

In this study it's aimed to determine that the differences between women and men part-time employment rates in terms of both common and national definitions are significant between the years 2000-2012. Second aim of the study to prove that the increase of part-time employment rates of men is significant in the period of 2000-2012. Another aim of the study to compare the rates that are related to both common and national definitions of part-time working with each other statistically. Finally, it's aimed to investigate the relationship between fertility and part-time employment rates of women.

3.3. The Importance of the Study

Part-time employment indicators help to show the development of flexible working among men and women. In the literature that is mentioned in the previous sections of the study, we can see that women prefer part-time working much more than men. It's aimed to get answer for the question: Is the situation still same despite the regulations for social rights that are applied for all workers (include men, women, part-timers or full-timers etc.) across the EU? According to the literature, there is relationship between fertility rates and part-time women employment. In this study also it's investigated that whether there is a significant correlation between these two variables between the years 2000-2012. The results may help the following researchers to evaluate the issue from different aspect.

3.4. Variables and the Hypotheses of the Study

In this study, part-time employment rates of men and women are used in terms of common and national definitions as variables. The variables can be seen in Table 1. Part time rates indicate percentage of total employment and include the workers who are between 15-64 years old. Time period includes between the years 2000-2012. The averages of part-time employment rates for those years are measured and shown in Table 1. In addition to this, according to the literature, many women who have child or children prefer part-time jobs to balance life and work. In this study, it's added one more variable which is titled "fertility" rate in order to investigate the relationship between the rate of part-time employment of women and fertility. Furthermore, the part-time employment rate differences of both men and women are tested in the study.

There are four basic hypotheses in the study:

- i. *The differences of part-time employment rates for both women and men that are based on common and national definitions are significant statistically between the years 2000-2012.*
- ii. *There isn't significant difference between part time employment rates that are based on common and national definitions between the years 2000-2012.*
- iii. *There isn't a significant correlation between fertility and part-time employment rates of women between the years 2000-2012.*
- iv. *The mean differences of part time employment rates are significant in the period of 2000-2012.*

4. Application and Findings

In order to test the hypotheses of the study, some statistical analyses are used and the findings are indicated below. All of the tests are nonparametric in the study due to sample size is less than 30. According to this Kruskal Wallis test that are indicated in Table 3 and Table 4, there are significantly differences (sig. < 0, 05) between male and female part-time employment rates in terms of both common and national definitions of part-time working. Due to the result, the first hypothesis is accepted.

Table 3: Ranks

	gender	N	Mean Rank
parttimecommon	female	18	25,94
	male	18	11,06
	Total	36	
parttimenational	female	18	25,39
	male	18	11,61
	Total	36	

Table 4: Test Statistics^{a,b}

	parttimecommon	parttimenational
Chi-Square	17,976	15,393
df	1	1
Asymp. Sig.	,000	,000

a. Kruskal Wallis Test

b. Grouping Variable: gender

Furthermore, part time rates that are based on common and national definitions are very close and the small difference (13,4 is the mean of part-time rates that is based on common definition while 15,9 is for national definition) is not significant (0,278>0,05) in order to one sample t test that can be seen in Table 5.

Table 5: One-Sample Test

	Test Value = 13.4 (the mean of rates for common def.)					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Part-time rates. national (the mean is 15,9)	1,101	35	,278	2,52500	-2,1306	7,1806

Due to the result the second hypothesis - There isn't significant difference between part time employment rates that are based on both common and national definitions between the years 2000-2012-is accepted. Depending on this result, the rates are based on national part-time hours that are accepted by the countries themselves as same as the hours that are defined as common across the EU statistically.

Table 6: Correlations (for common definition)

			Part-time female (common def.)	fertility
Spearman's rho	Part-time.female (common definition)	Correlation Coefficient	1,000	,207
		Sig. (2-tailed)	.	,409
		N	18	18
	fertility	Correlation Coefficient	,207	1,000
		Sig. (2-tailed)	,409	.
		N	18	18

Table 7: Correlations (for national definition)

			fertility	Part-time female (national def.)
Spearman's rho	fertility	Correlation Coefficient	1,000	,085
		Sig. (2-tailed)	.	,737
		N	18	18
	Part-time.female (national definition)	Correlation Coefficient	,085	1,000
		Sig. (2-tailed)	,737	.
		N	18	18

In order to test third hypothesis it's used nonparametric correlation test that is titled "Spearman's rho". Depending on this test that is can be seen in Table 6 and Table 7, there is no correlation significantly between part-time women employment rate and fertility in the period of 2000-2012. According to the result the third hypothesis is accepted so it can be sad that there is no relationship significantly between fertility and part-time women employment rates for the 18 countries between the years 2000-2012.

It's tested by using Friedman test statistics to determine whether the mean ranks of women and men part-time employment rates significant from 2000 to 2012. The rates that are use in the test are based on common definition. The mean ranks for each group are indicated in Table 8 and Table 9.

Table 8: Friedman Test: Mean rank of part-time employment rates of women

Years	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Mean rank	5,67	4,97	4,31	6,39	6,58	6,86	6,14	6,83	6,58	8,50	9,17	9,56	9,44

Table 9: Friedman Test: Mean rank of part-time employment rates of men

Years	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Mean rank	5,89	3,78	3,56	4,47	4,81	5,33	6,17	6,31	7,58	9,61	10,28	11,11	12,11

Depending on the findings in Table 10 and 11, we see that the mean differences of part-time rates of women and men in the period of 2000-2012 are significant (sig. 0,000 < 0, 05). According to this result, the fourth hypothesis is accepted. Furthermore it's indicated that the part time employment rates of men have been increasing since 2002. It's also pointed out that in many years the growth of part time employment rates of men are more than women's.

Table 10: Test Statistics^a (for part-time employment of women)

N	18
Chi-Square	40,680
df	12
Asymp. Sig.	,000

a. Friedman Test

Table 11: Test Statistics^b (for part-time employment of men)

N	18
Chi-Square	119,481
df	12
Asymp. Sig.	,000

b. Friedman Test

5. Conclusion and Discussion

In this study, it's investigated four main factors to the related issue. The first of them is to prove the differences between part time employment rates of women and men are significant for the 18 country between the years 2000-2012. According to the findings we see that women prefer part-time jobs much more than men. This is the excepted result that supports the previous researches. The second factor that is aimed to get answer for the question: Are the differences of the part-time rates that are based on common and national definitions significant? This is measured for statistical purpose. The third factor that is handled in the study that the relationship between fertility rates and part-time women employment rates. In contrast to Cristina Sousa Gomes and others' research it was found that there is no

significant correlation between fertility and part-time women employment. In the literature review process it wasn't found much empirical study except from Cristina Sousa Gomes and others' research to investigate the relationship between fertility and part-time women employment rates. But some researchers claim that there is a relationship between these two variables. It wasn't expect to find the correlation between these two variables at the beginning of the study due to the EU has been improving the social rights in favor of women with regulations include satisfactory level of maternity leave as well as pregnant women's social rights which was regulated by Directive 92/85/EEC. Turkey isn't a member country but as a candidate country the most of the regulations must be adapted. As you see in Table 1, part-time employment rates are much lower in Turkey than other countries. If we comment the issue for Turkey, if flexicurity approach is adapted to active labor market policies effectively, this kind of work may help especially to disadvantaged workforce -such as women- of the country. Part-time jobs are not common in Turkey and the social rights regulations of the EU haven't been adapted exactly to legal system of the country. According to these regulations it can be thought that many women who have child or children can prefer full time jobs as well as part times both in the EU and Turkey.

The fourth factor that is investigated that whether the rate differences of part-time working of both men and women are significant or not in the period of 2000-2012. It's important to determine this for us because if the part-time employment rates of men are increasing significantly, it means legal regulations on this issue may encourage men to prefer part-time. According to Friedman test statistics as you can see in the previous section of the study, the part-time employment rates of men have been increasing significantly since 2002. Addition to this the growth value is more than part time employment rates of women.

In this study it's aimed to investigate the issue with different dimensions. It's recommended to the following researchers to deal with the subject with comparing the variables in different time periods such as 1999-2004; 2005-2009; 2010-2014.

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